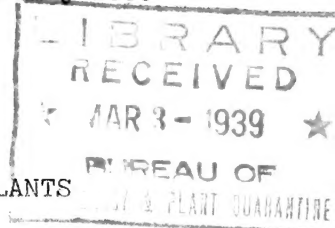


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January 1939

United States Department of Agriculture
Bureau of Entomology and Plant Quarantine



A SPECIAL CAGE FOR CONFINING INSECTS ON TALL PLANTS
OR PORTIONS OF A PLANT

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A special type of cage was used in the Salt River Valley of Arizona in 1938 for confining insects on sugar-beet seed stalks. A cage of special design was needed, inasmuch as the stalks of these plants reach a height of from 5 to 7 feet and have a spread of from 2 to 3 feet. The cage designed for enclosing these plants was very satisfactory and cost approximately 50 cents.

Construction of cage.--The frame of the cage consists of two No. 9 gauge wire hoops approximately 30 inches in diameter, suspended 4 feet apart between two 1 by 2 inch stakes 8 feet long (figure 1). The hoops were made by twisting the ends of the wire around each other to form a lineman's splice. A cloth tube of sufficient diameter to go around the hoops and long enough to tie at each end was sewed and placed around the hoops before they were nailed in position on the stakes. The hoops were then tacked to the inside of the stakes by means of small fencing staples, and the cloth was gathered at each end and tied as shown in figure 1. To strengthen the cage further and to prevent the staples from being pulled out by separation of the stakes, a piece of lath was tacked across the stakes at the top and a similar piece approximately 1 foot below the lower hoop. These laths were nailed to the stakes with a single nail in each place so that the cage could be folded flat as shown in figure 2.

Use of cage.--The cages were taken into the field folded flat, and unfolded as they were used. The beet stalk to be caged was selected, and the cage, with the lower end open, was placed over the stalk. The side stakes were then driven into the soil, and the bottom of the cloth tube was gathered in about the seed stalk and tied. Figure 3 shows the cage in place in the field. To introduce the insects into the cage the top gathering was loosened. Introduction can be greatly facilitated by replacing the string at the top with a rubber band and then replacing the string after the insects have been introduced. This prevents the whole top from opening and falling inside of the cage and still allows sufficient expansion for the insertion of a small tube or vial. A sleeve sewed into the side of the cage, and tied up when not in use, might be found more convenient for introducing or removing insects, although this has not been used by the author.

Cages of this type were used to confine species of Lygus, pentatomids, and the false chinch bug on sugar-beet seed stalks. For the larger insects a cheap grade of curtain scrim was found satisfactory, while for the false chinch bug a high-grade cheesecloth was used. Smaller cages of the same type, approximately 11 inches in diameter, 20 inches tall, and covered with high-grade cheesecloth, are being used this winter for confining beet leafhoppers on creosote bush.

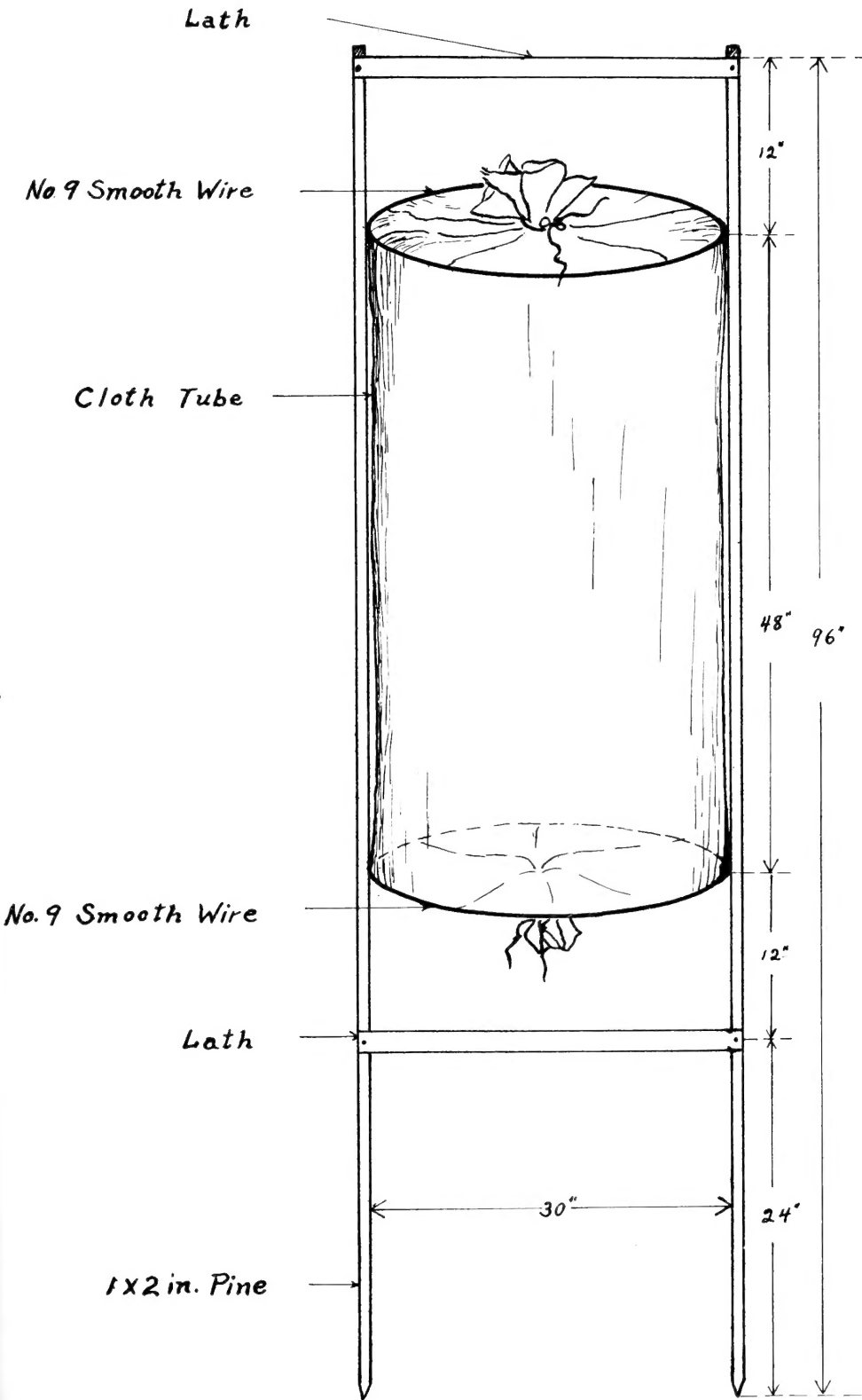


Figure 1.--Diagram of the special cage for confining insects on tall plants.

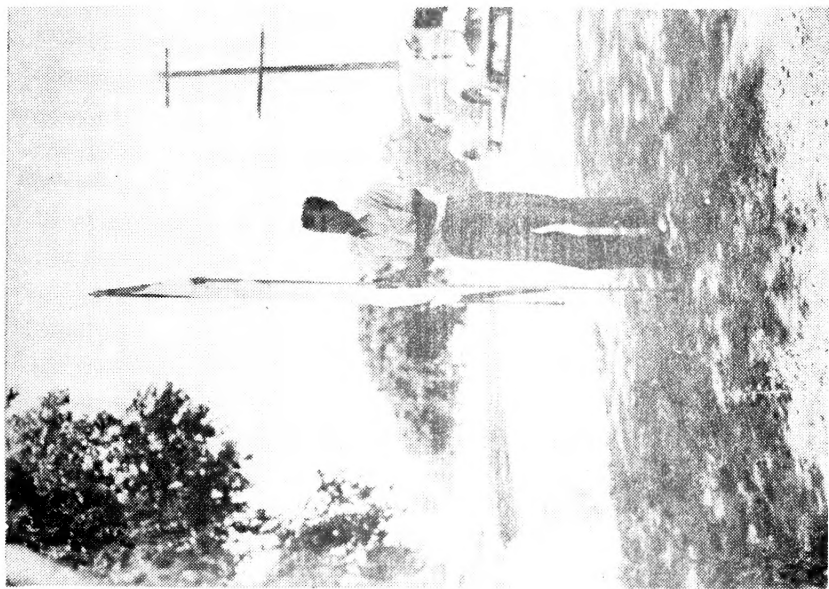


Figure 2.--The cage folded flat for convenience in handling.

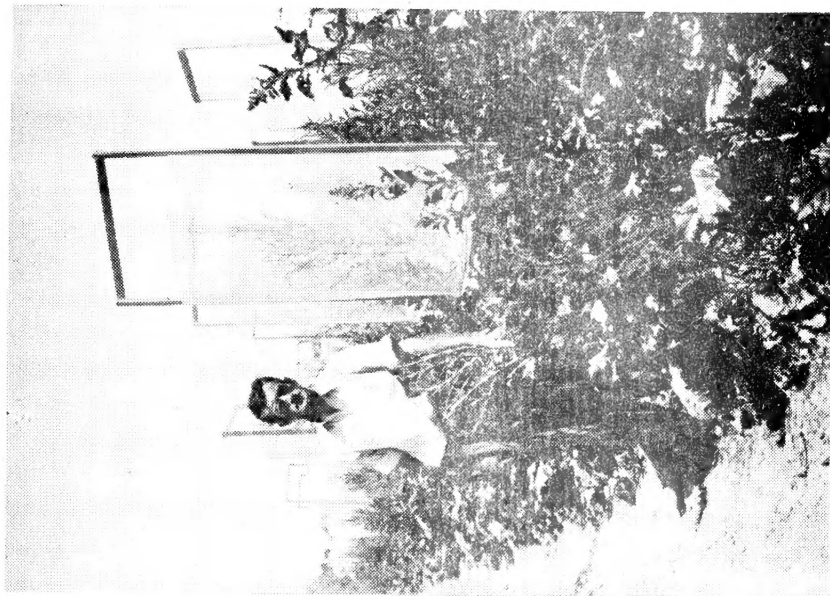


Figure 3.--The cage in position in the field.

